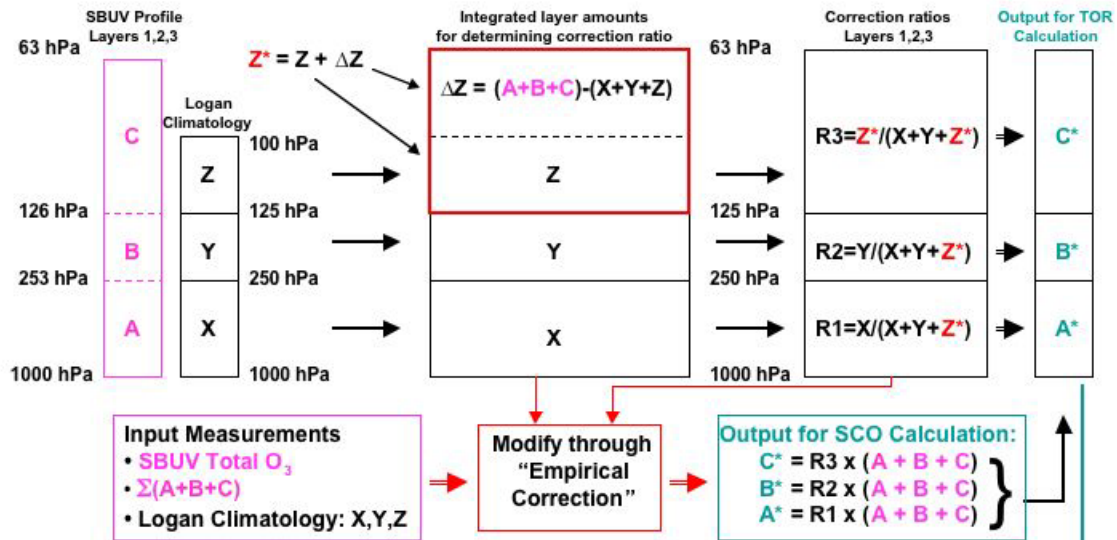


Calculation of TOMS/SBUV Tropospheric Ozone Residual

Part I: Calculate Stratospheric Column Ozone (SCO)



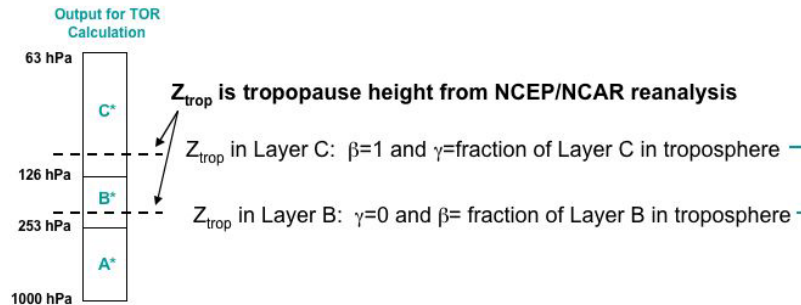
Part II: Calculate TOR from TOMS Total O_3 and SCO

(2a) $SCO = \text{SBUV Total } O_3 - \gamma C^* - \beta B^* - A^*$

(2b) $TOR = \text{TOMS Total } O_3 - SCO$

Note: γ and β are values between 0 and 1 and are determined by NCEP/NCAR Reanalysis tropopause height

Define fractional coefficients (β and γ) for TOR calculation



Part II: Calculate TOR from TOMS Total O_3 and SCO

(2a) $SCO = \text{SBUV Total } O_3 - \gamma C^* - \beta B^* - A^*$

(2b) $TOR = \text{TOMS Total } O_3 - SCO$

Note: γ and β are values between 0 and 1
if Z_{trop} is in Layer A, TOR is not calculated

Figure 6. Top panel is a schematic diagram showing how SCO and TOR values are calculated using empirically corrected SBUV measurements. To calculate the SCO, the coefficients β and γ are defined (bottom panel) according to where the tropopause is located within the lowest three SBUV layers.